Homework #1
RPAD 316
Professor Stephen Holt

Instructions: You will be doing three problems by hand and three problems using Stata. For the problems by hand, show your work for each step. For the Stata section, when asked for graphs, save the graph as a .png file and paste the image into the appropriate section of the word document. Paste your code that produced the graph below the graph. For other statistics, for this assignment, copy the output from your logfile that contains the statistics asked for by a problem (including commands).

Dataset 1. Average time spent volunteering per day in each state (in minutes).

State Code	State Name	Avg. Minutes per day Volunteering
1	Alabama	9.6
2	Alaska	13.7
4	Arizona	8.9
5	Arkansas	6.0
6	California	8.2
8	Colorado	9.5
9	Connecticut	8.0
10	Delaware	6.7
11	District of Columbia	6.4
12	Florida	7.0
13	Georgia	9.3
15	Hawaii	8.9
16	Idaho	11.0
17	Illinois	8.5
18	Indiana	10.7
19	Iowa	9.1
20	Kansas	10.6
21	Kentucky	10.4
22	Louisiana	8.2
23	Maine	7.7
24	Maryland	10.4
25	Massachusetts	7.9
26	Michigan	8.9
27	Minnesota	9.8
28	Mississippi	7.6
29	Missouri	8.9
30	Montana	9.6
31	Nebraska	8.4
32	Nevada	4.6
33	New Hampshire	7.0
34	New Jersey	9.4
35	New Mexico	8.9
36	New York	6.7
37	North Carolina	10.0
38	North Dakota	8.0
39	Ohio	8.5
40	Oklahoma	10.0
41	Oregon	11.8
42	Pennsylvania	8.3
44	Rhode Island	8.3
45	South Carolina	10.0
46	South Dakota	8.0
47	Tennessee	9.6
48	Texas	8.3
49	Utah	23.2
50	Vermont	8.9
51	Virginia	9.2
53	Washington	8.4
54	West Virginia	7.6
55	Wisconsin	7.6
56	Wyoming	6.1

1. Using the information in dataset 1, find:
    a. the mean of volunteer time across the states.

b. the standard deviation of volunteer time across the states.

c. the minutes volunteered at the 75^{th} percentile.

2. Using Stata and dataset 2, provided on Blackboard, do the following:
    a. Create a pie chart showing the distribution of the race of the teachers in the sample.

    b. Create a histogram of the math test score in the sample.

    c. Create a bar chart showing the mean math test score by treatment status.

    d. Create a table that includes the mean and standard deviation of test scores and number of classmates in the full sample, in the treatment group, and in the control group. Note: for this week, it is okay to copy and paste the output from a log file. Be sure you include the commands used in the output you copy over.

Extra credit:

Create a histogram that plots the distribution of the math scores with separate bars for the treatment and control groups in the same graph.